TARGHEE NATIONAL FOREST

Mountain Pine Beetle Suppression Plan

FISCAL YEAR 1967

Prepared by: John Kinchelos — Insect Control Officer — 10/21/66 Date

Submitted by: D Z Mazurek — Timber Staff Officer — 10/21/66 Date

Recommended by: Alvin F. Wright — Forest Supervisor — 10/21/66 Date

Approved by: _____ — Assistant Regional Forester, TM — Date

TABLE OF CONTENTS

		Page
1.	History	1
2.	Present Infestation	2
3.	Proposed Control	3
4.	Organization	9
5.	Financial Plan	16
6.	Collaboration and Working Agreements	20
7.	Safety and Training	21
8.	Equipment, Supplies, and Services	21
9.	Treating Standards	23
10.	Multiple Use Coordination	27
11.	Information and Education	28
12.	Roads	28
13.	Reports and Records	30
14.	Planned Work Schecule	32
15.	Appendix	34
	A. Safety Coordination Plan	34
	B. Information and Education Plan	37
	C. Map Section	40

Mountain Pine Beetle Control Project
Targhee National Forest
Master Plan
F.Y. 1967

1. History

   a. Tree species infested - Pinus contorta (lodgepole pine).

   b. Insect species - Dendroctinus monticola (mountain pine bark beetle).

   c. Age of infestation - Mountain pine beetle was recognized in epidemic proportions on the Targhee National Forest as early as 1927, with major infestations occurring about 1930, 1948, and 1959 to the present. It is difficult to say in what year that epidemic infestations of the beetle originated on this Forest. Evidence of past epidemics appear in the Forest on old logs lying on the ground, which by their stage of deterioration, indicate beetle-killed trees of at least 50 years ago.

   The present epidemic infestation was first recognized in the fall of 1958. Control efforts have been carried out each year since the spring of 1959. The extent of financing has not allowed the treating of all infested areas. Some areas of heavy and extensive infestation were left untreated and efforts were concentrated to keep the infestation from spreading in newly hit stands of timber.

   Control measures seem to have been effective to the extent that buildup within some treated areas has been held within acceptable limits. However, there were extensive insect-infested areas on private, State, B.L.M., and National Forest land which were untreated. These areas have caused considerable reinfestation on the Forest and made complete control impossible. Also, prior to the fall of 1964, adequate survey funds were not available. This resulted in incomplete surveys and all areas of the infestation were not detected.

   Adequate survey funds were given to the Forest in the fall of 1964 and all epidemic infestations were detected and surveys were completed. Follow-up funds available for treating were inadequate, however, and treating was possible only on high priority areas.

d. Past control - The following tabulation shows the fiscal years that treating projects were carried out on the Targhee National Forest.

Year		Trees Treated	Year		Trees Treated
1927	-	3,079	1954	-	498
1928	-	31,204	1959	-	3,197
1929	-	30,065	1960	-	5,963
1930	-	35,987	1961	-	2,983
1949	-	21,472	1962	-	9,415
1950	-	15,170	1963	-	43,787
1951	-	640	1964	-	59,988
1952	-	77	1965	-	28,298
			1966	-	368,843

Prior to 1961, logging of insect-infested trees was insignificant due to a lack of market. Since that time, a stud market has developed and much logging has been diverted to infested areas. This method of control has accounted for a considerable number of infested trees being removed in addition to the figures shown above.

The main method of treatment used, however, has been hand-spraying with ethylene dibromide. Small areas also have been treated by fell-and-burn method.

2. Present Infestation

a. Estimated number of infested acres by ownership:

National Forest	State	B.L.M.	Private	Total
125,000	7,850	2,000	10,000	144,850

b. Estimated number of trees infested by ownership:

National Forest	State	B.L.M.	Private	Total
300,000	13,100	10,000	60,000	373,100

c. Boundaries of infestation - (See map in Appendix):

(The estimates in items a and b above do not include the trees or acres of the main Rexburg infestation.)

3. Proposed Control

a. Suppression Objective - The objective of the F.Y. 1967 Targhee National Forest bark beetle control project is to effectively arrest the beetle epidemic on all infested areas except for the main Rexburg infestation. The Rexburg infestation is so intense and complex that there is considerable doubt as to the economical and entomological feasibility of a control program. A survey of the area in September, 1966 showed approximately 700,000 infested trees on about 36,000 acres.

b. Work objectives -

(1) Recon and spot all infested areas.

(2) Treat as much of the infestations as are shown under "treating units" as is possible during the fall of 1966 and winter of 1966 - 1967.

(3) In September, 1966, the survey results and analysis for the Rexburg infestation was presented to the Regional Forester for his consideration.

(4) Spring work in 1967 will be the completion of any work which adverse weather during the winter made impossible to finish.

If the decision is to undertake a treating project on the Rexburg infestation, and funds are made available, a project for this area will be initiated and carried out.

c. The following outline shows survey methods that will be used to collect the information which is necessary to proceed with fall work.

	Type of Area	Method
(1)	Entire Forest	Aerial reconnaisance.
(2)	Rexburg infestation	Survey by Regional Office crew.
(3)	New areas	Reconnaisance and prespot.

(4)	Not treated F.Y. 1966	Reconnaisance survey.
(5)	Treated F.Y. 1966 (including July)	Reconnaisance and prespot and contractor survey, spot and treat.

d. Below are listed methods of treatment that will be used:

(1) Logging.

(2) Pushover and burn where practical, with Regional Forester's approval only.

(3) Fall and burn during winter where practical.

(4) Chemical treatment where the above methods are not practical to use. Chemical treatment will include either spraying standing trees or felling and sprinkling.

The control objective is to completely suppress the epidemic infestations on each treating unit to an endemic state. However, experience has shown that follow-up treatment is generally necessary. Therefore, it is recognized that such follow-up treatment, in areas needing it, will be necessary for the following one and possibly two years in order to completely suppress the bark beetle to an endemic state.

Logging (First Line Defense)

(1) Timber sales on the Targhee Forest are being concentrated on insect-infested areas wherever possible. However, present logging and mill capacity, access, and variation of intensity of infestation limit the amount of infested trees that can be removed by logging. Additional timber purchasers are being contacted to determine if the number of infested trees to be removed by logging can be increased. Timber sales which are now in progress and the proposed sales which are now being offered approach the upper limit of volume of the mill capacity which is available at present.

(2) **Summary of** planned sales program to control or assist in controlling infestation is as follows:

(a) Active sales from which infested trees may be removed during current suppression period.

Name of Sale Name of Sale	District	Date Sold	Volume LPP MBF	Volume LPP Removed to 7/31/66	No. Infested Trees Removed to 7/31/66	Volume EST. to Remove by 7/31/67 MBF	No. Infested Trees EST. to Remove by 7/31/67	Acres cut to 7/31/66
High Point #1	3	12/64	1,100	800	8,000	300	3,000	136
Fish Creek	6	12/64	4,000	2,200	20,000	1,800	18,000	240
Upper Robinson	4	1/65	4,800	---	---	4,800	1,000	---
High Point #2	3	7/65	1,600	500	4,000	1,100	8,800	81
East Sheridan	1	8/65	850	---	---	850	1,500	---
W.Bishop * Mtn.	3	11/65	5,100	---	---	5,100	5,000	---
Elk Wallow II	3	12/65	2,000	---	---	2,000	1,000	---
Big Bend * Ridge	3	12/65	3,000	1,400	13,000	1,600	15,000	222
Graham * Springs	6	12/65	680	---	---	680	5,000	---
Fall River * Ridge	4	6/66	4,200	600	3,000	3,600	2,000	100
Snow Creek	4	8/56	8,000	6,450	1,500	1,550	1,500	712
Moose Creek	2	6/60	318,000	6,700	1,000	3,000	1,000	125
Misc. Small Sales							2,000	
TOTAL						26,380	64,800	

* Sales sold specifically for insect-control under S-24

(b) Proposed insect-control sales which will contribute to control during the current suppression period (September 11, 1966 to July 31, 1967).

Name of Sale	District	Proposed Sale Date	LPP Volume MMBF	Acres to Cut	EST. No. Infested Trees
Bitch Creek *	5	12/1/66	8.5	1100	6600
Badger Creek ***	5	12/15/66	3.0	600	2400
Anderson Mill ***	3	12/31/66	4.0	600	1200
Shaefer Creek ***	4	12/15/66	4.0	450	450
Sheridan II **	1	1/20/67	1.0	400	400

(c) Summary of insect-control sales

1. Estimated volume of infested LPP timber to be cut and hauled during current suppression period ending July 31, 1967:

   17,000 MBF

2. Estimated volume of infested LPP will be cut and not hauled by July 31, 1967:

   8,000 MBF

3. Estimated number of infested trees to be removed by logging during current suppression period ending July 31, 1967:

   54,800

4. Estimated number of infested trees that will be cut and not hauled by 7/31/67 (decked):

   10,000

---

* Field work complete ready to appraise
** Reconnaisance complete
*** Reconnaisance not done at time of this report

Other Control

(1) Treating Units

The chief of the Forest Service has indicated methods of treatment by priority, wherever possible, as follows:

(a) Log insect trees.

(b) Push over and burn (needs Regional Forester's approval).

(c) Fell and burn.

(d) Chemical treat.

The following description of treating units shows composition of unit, number of trees and acres, and planned methods of treatment in accordance with the above priorities.

It is planned to have the main headquarters for the project at the Supervisor's Office in St. Anthony, with the Forest divided into three zones, these to be further broken down into units and sub-units to insure systematic treatment of the infestations.

e. Zones

Zone II

This zone includes all infestation on the Spencer, Island Park, and Ashton Ranger Districts. The zone headquarters will be at Island Park Ranger Station. It is the largest zone and is set up in this manner because of the central location of the main camp, goop dump, and excellent facilities for the project.

Units:

Treating Units

There will be twnety-eight treating units on the zone. All units will have a reconnaisance made and prespotted except three. These three units will be contracted without an estimate of trees in order to take advantage of early fall weather. The other units will be prespotted by Forest Service crews in lieu of a survey. The intensities and extent of infestations will determine method of treatment and whether force account or contract treating will be used. Methods will be fall and treat, spray

standing, fall and burn, and logging. Project estimates are 95,000 trees on 36,050 acres of National Forest and 4,000 acres of alienated lands.

Zone III

This zone will include all of the Teton Basin, and Swan Valley Ranger Districts, and the Pine Creek drainage of the Rexburg District. The headquarters for the zone will be at Driggs, Idaho. An insecticide dump is located at the Rapid Creek Guard Station three miles east of Driggs.

Units:

There will be sixteen treating units on this zone. All units will have a reconnaisance made and prespotted except two. These two will be contracted without an estimate of trees in order to take advantage of early fall weather. The other units will be prespotted by Forest Service crews in lieu of a survey. The intensities and extent of infestations will determine method of treatment and whether force account or contract treating will be used. Methods will be logging, fall and treat, standing treat, and fall and burn. Project estimates are 141,200 trees on 39,150 acres of National Forest and 5,850 acres of alienated lands.

Zone IV

This zone will include all of the Porcupine District. The headquarters will be at the Porcupine Guard Station.

Units:

There will be twenty-six treating units on the zone. All units, except three, will have a reconnaisance made and prespotted. Three units will be contracted without an estimate of trees in order to take advantage of early fall weather. The other units will be prespotted by Forest Service crews in lieu of a survey. The intensities and extent of infestations will determine method of treatment and whether force account or contract treating will be used. Methods will be fall and treat, standing treat, fall and burn and logging. Project estimates are 146,900 trees on 51,800 acres of National Forest and 8,000 acres of alienated lands.

All figures shown above are estimates based on the best information available. Detailed plans for each zone and unit will be prepared and approved prior to start of work this fall. See the map in the appendix of this plan for location of infested areas. The summary of trees and acres which are considered practical to treat is as follows:

Total Trees Infested - 383,100

Total Acres Infested - 144,850

N.F. Acres Infested - 127,000 (Includes BLM)

Alienated Acres Infested - 17,850

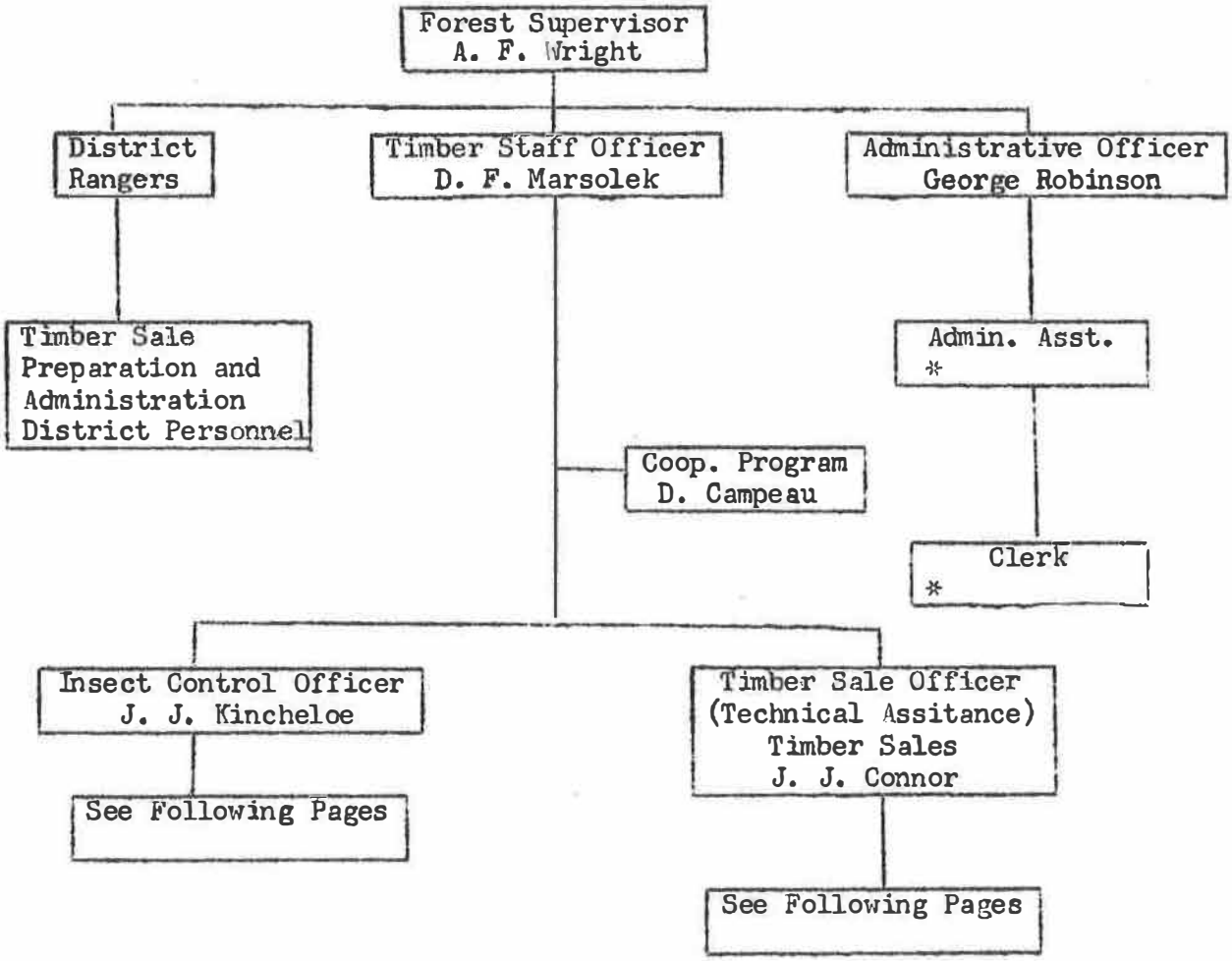
It is not possible to show in this plan how many trees and acres will be treated by each method or how many will be contract or force account. This will be shown when pre-spotting is completed. A plan supplement will be prepared, with units listed showing number of trees and acres as soon as all units are spotted.

4. Organization

Due to the size and complexity of this project, it is planned to have the insect control officer, under direction of the timber staff officer, directly supervise the entire project, with headquarters in St. Anthony. The project will be divided into three zones (as shown on the attached map). Each zone will have a zone supervisor under supervision of the insect control officer. The zones will be divided into units and further divided into sub-units, where necessary.

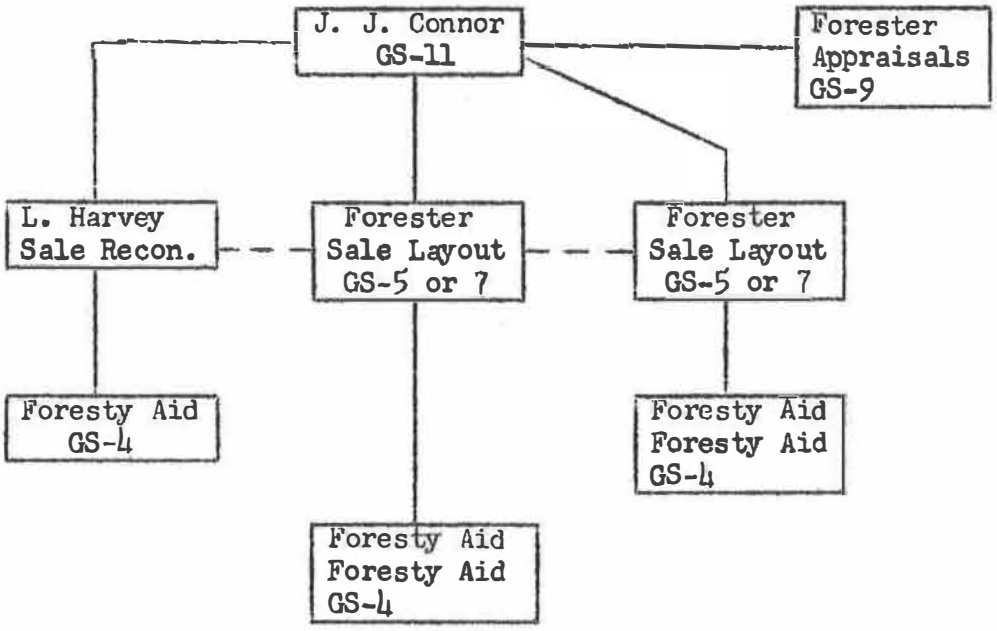
As far as the insect-control project is concerned, it is considered advisable for the insect control officer to have line authority within the control project organization. The timber staff officer will coordinate the Forest timber sales program, cooperative treating programs and the insect-control treating program. The District Rangers will participate in all planning, multiple use coordination and any other factors which might affect management of their districts. Although Rangers will not be involved in the mechanics of the insect treating project, they will prepare and administer timber sales by district personnel and S.O. staff personnel. These personnel will not be a part of the zone organization. The following pages outline the entire project organization.

a. Forest Supervisor's Organization (Insect-Control)

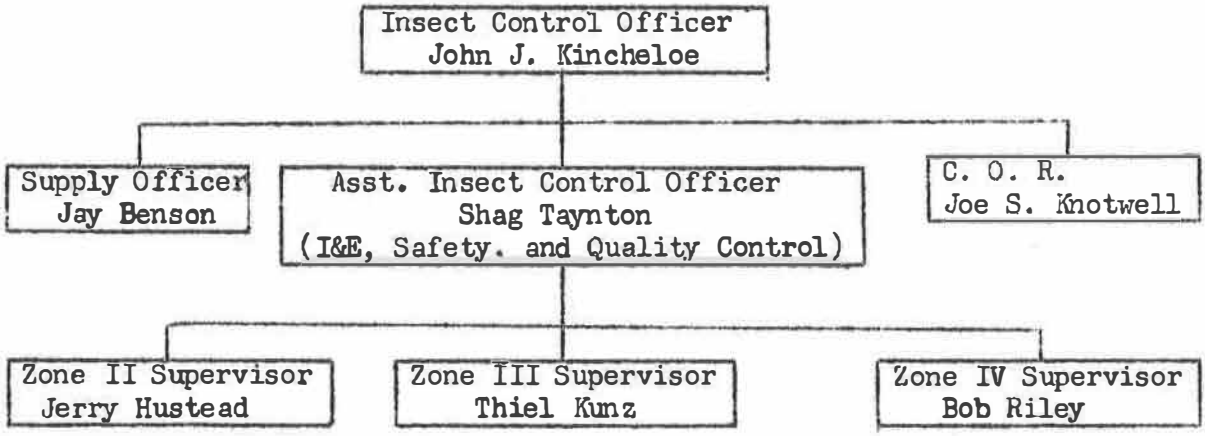


* To be assigned.

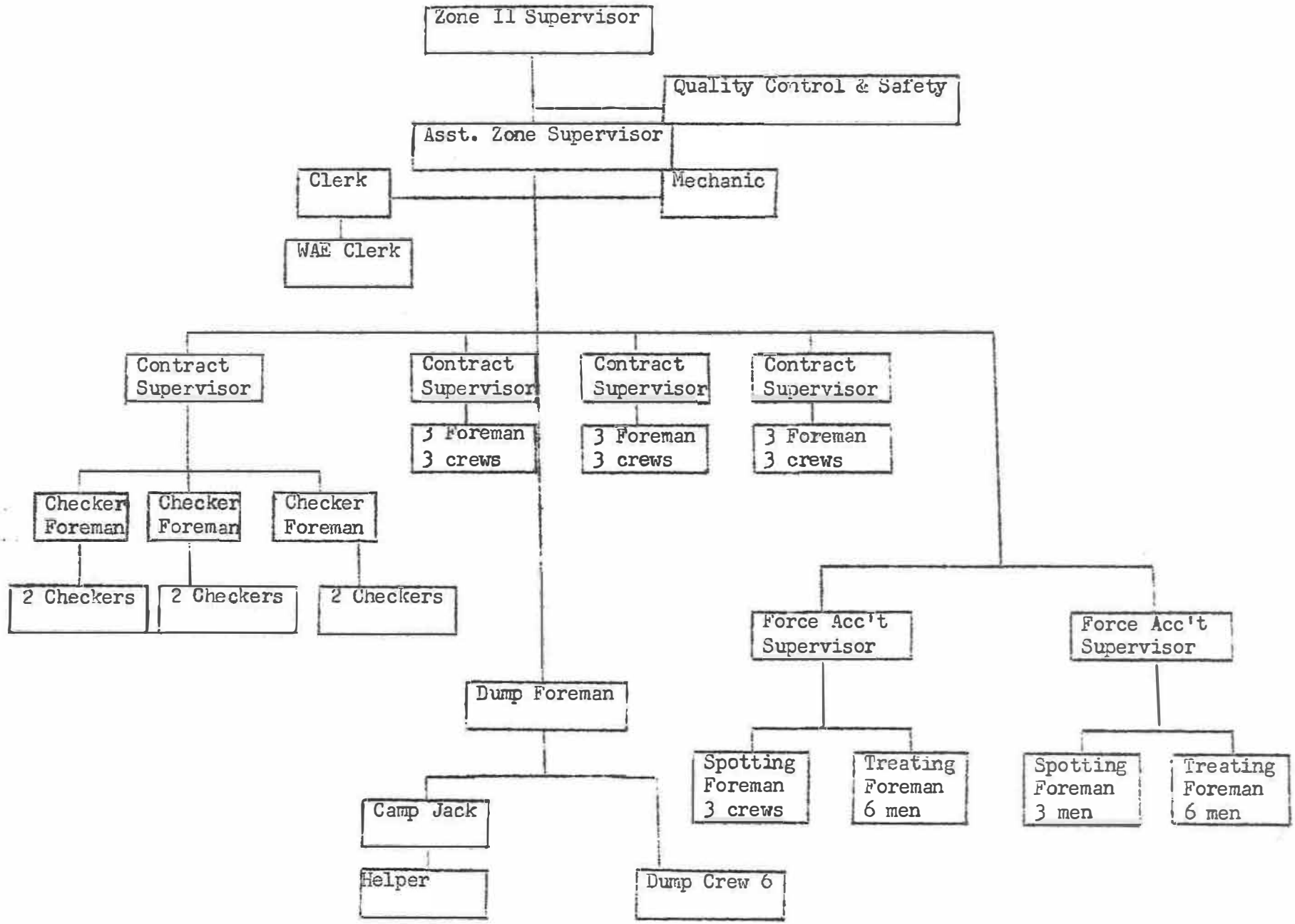
b. Timber Sale Organization - St. Anthony, Idaho



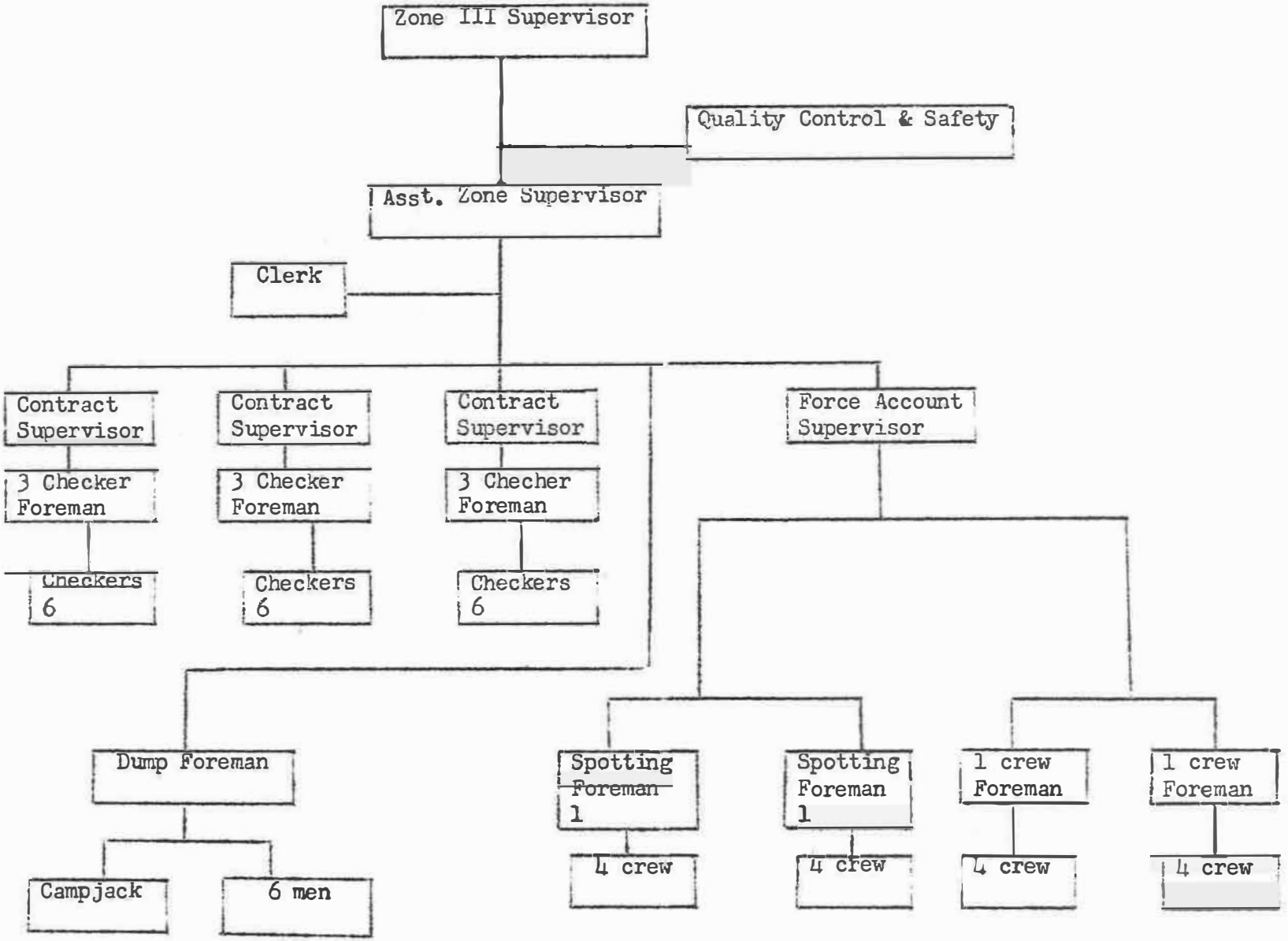
c. Insect-Control Headquarter Orgainzation - St. Anthony, Idaho



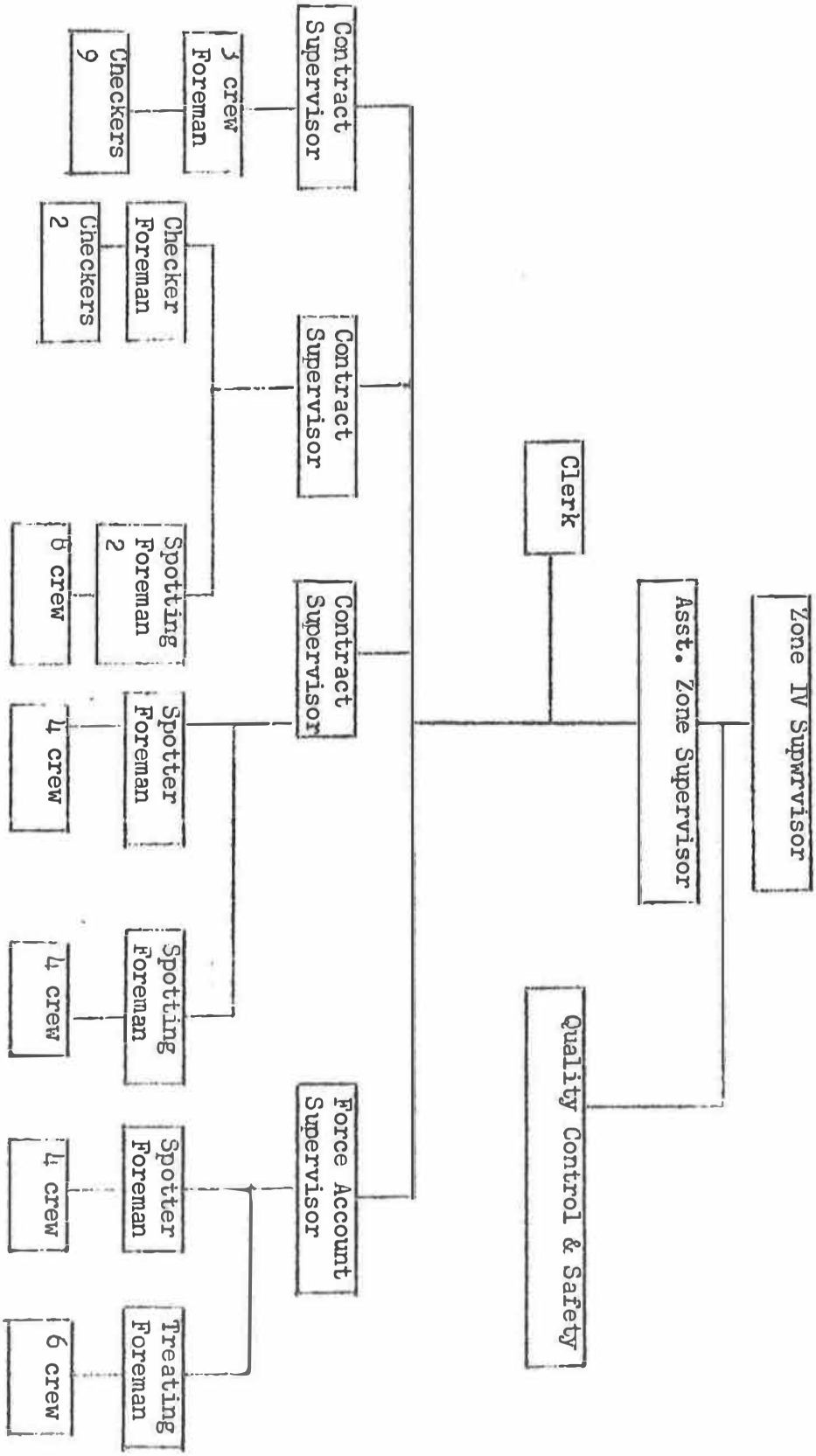
d. Zone II Organization - Headquarters at Island Park, Idaho



e. Zone III Organization - Headquarters at Driggs, Idaho



f. Zone IV Organization - Headquarters at Porcupine Guard Station out of Ashton, Idaho.



g. Other Personnel Needed - Off-Forest detailers are acquired by direct contact with Forest Supervisors and Regional Forester staff assistance. Most of the available personnel on the Forest have been included in the insect-control organization. Therefore, we will need additional qualified and experienced personnel for insect survey, spotter and checker foreman and crewmen, and mechanics. The following are our anticipated needs:

Type of Detailers	Number	Approximate Period
Mechanics	2	Sept. 15 to Jan. 31
Experienced insect-control workers	37	Oct. 1 to Jan. 31

5. Financial Plan

a. Project Funds Available - $1,001,512

b. Proposed Coop Funds:

None

c. Estimated Total Project Costs - $2,114,678

This does not include any funds planned for treating the main Rexburg infestation other than surveying and timber sale preparation and administration.

d. Breakdown of Estimated Costs:

Insect-Control Funds

Funds to Complete F.Y. 1965 Project	$ 20,000
Contract Treating	1,121,690
Timber Sale Preparation and Administration	25,000
Road Maintenance, construction, and Snow Removal	125,900
General Expense Assessment	75,000
Base and other Salary, Travel, and misc. expenses	30,000
Supplies	35,000

1300-C/ Covers these items. 11.7%

16,000 Timber sales,

Insecticide	120,500
Subsistence	6,000
Equipment	5,000
Salaries	465,288
Travel Expense	40,000
Equipment Rental	35,000
General Purpose Improvements	10,300
TOTAL	$2,114,678 *

Other planned Forest funds, from which the insect-control project will directly benefit, are as follows:

Timber Sale Preparation and Administration (031 funds)	$ 25,000
Road Construction (FR&T) (F.Y. 1966-67)	797,522
Road Maintenance (FR&T)	60,780
TOTAL	$ 883,302

e. Financial Controls

(1) Financial Management

Each District Ranger, and Supervisor's staff will submit, and have approved by the Forest Supervisor, a 1300-4, Project Work Plan, for timber sale work, roads, RDMA, and clerk salary related to insect-control.

Each zone supervisor will submit a 1300-4, Project Work Plan, for survey and suppression work on that zone.

---

* This is the total needed to October 15, 1967. Needs for each fiscal year is as follows:

F.Y. - 1966	$1,962,190
F.Y. - 1967	152,488
TOTAL	$2,114,678

The Administrative Officer will allot funds to the districts, according to established procedures. The zone supervisors will be notified of the funds, within which they must operate, by the Administrative Officer upon approval of the financial operating plan approved by the Forest Supervisor.

The insect control officer and zone supervisors will keep cost records throughout the project. Zone cost records will be reviewed periodically and cost checked against progress. A complete fund review will be held in February, 1967. The Regional Forester will be notified of the financial status of the project immediately following this review. Any necessary adjustments needed will be requested at that time.

(2) Cost Keeping and Analysis

To provide for accurate cost keeping and analysis, all suppression costs will be ADP coded. Each unit will code separately as follows:

Unit	Code
S.O.	30
Districts	By number
Zone II	17
Zone III	18
Zone IV	20
Coop Program	19

The ADP Code is as follows:

1st Digit

1 - Force account chemical treating.
2 - Fell and burn.
3 - Payment to tree treating contractors.
4 - Spotting for contract areas.
5 - Stringlining for contract areas.
6 - Tree spraying contract administration (include checker foreman and checkers' salaries, travel, supplies, and equipment, etc.).

7 - Project road construction and maintenance (include snow removal).
8 - Camp costs.
9 - Overhead (include only project supervisors and their assistants, clerk, safety officers, S.O. personnel, and quality control officers. All other overhead are field personnel and should be charged to the work they supervise).

2nd Digit

71 - Supplies and miscellaneous
72 - EDB (Include dump charges, oil and all insecticide handling costs).
73 - Meals
74 - Equipment
75 - Salaries
76 - Travel (personal car and per diem)
77 - Equipment Rental (pool and non-pool equipment)
78 - Services

(3) Examples of Coding

Porcupine District Ranger Salary - 704-914-01-04

Zone II Contract Checker's Pickup Rental - 704-044-01-17-0-0000-6-77

Insect Control Supply Officer's Salary - 704-044-01-30-0-0000-9-75

Ashton District Clerk Salary - 704-910-01-03

Zone III Clerk Salary - 704-044-01-18-0-0000-9-75

Island Park Insect Timber Sale Preparation and Administration-Forester's Salary - 704-044-01-02

S.O. Forester's Salary - 704-044-01-30

(3.) Control Dates

An insect-control ~~financial~~ review will be held in February, 1967 and on the first and third Tuesdays in ~~June~~, 1967 at the Targhee National Forest Supervisor's Office. Each district and zone will have a reocrd of expenditures to date and their projected expenditures to June 30, 1967. Surpluses or deficits in allotments will be adjusted as needed.

All contract unit tree estimates will be presented at the third Tuesday of June meeting. The money for contract-treating payments will then be balanced between the contracts, or limits set for maximum number of trees to be treated with F.Y. 1967 money.

f. Functional Supervision Controls

The Administrative Officer will visit each zone headquarters and make a check of the financial status, contract compliance, plant operation, and other business management activities at the close of each 30 days of operation. Additional trips may be necessary if the administrative officer decides that the operation is not satisfactory.

A memorandum will be furnished to the Forest Supervisor by the Administrative Officer within 5 days after each 30-day visit outlining briefly his information and any recommended action needed. The first visit will be made to each zone not later than October 31.

The timber staff officer will visit zone projects at least each 30 days beginning of October 15. He will review the overall project operation including the efficiency of the project. He will furnish to the Forest Supervisor a memorandum within 5 days after each trip outlining his findings and list any recommended needed action.

6. Collaboration and Working Agreements

a. Attempts will be made to secure cooperation or permission for treating on alienated lands within or adjacent to the Forest.

Agreements will be negotiated or permission will be obtained for treatment on private lands.

Permission has been granted by the Chief to treat infestations on private lands to a maximum of 20% of the total project cost.

b. There will be chemical, fall and treat, and possibly fall and burn treating contracts, and horse and subsistence contracts on the various units. These contracts will be prepared and awarded as soon as possible so as much work can be done during the fall as possible. We will attempt to have all contracts reviewed by the Regional Forester's Insect and Disease Control Branch and P&S contract specialists prior to invitation to bid.

7. Safety and Training

An I&E, training, and safety officer will be assigned to the overall project. He will periodically check for compliance with the Forest, District, and zone safety plans and report to the insect control officer. He will provide assistance to the various units in training, supplies, and information. He will consult with and advise the zone supervisors on any suggestions for improvement of safety practices.

Training--Before any work is started on suppression projects, a formal training session will be held including classroom and field study. The Insect Control Officer will conduct these sessions assisted by the most experienced personnel available. Contractors will receive the same type of training before contract work begins. See Appendix A for Safety Coordination Plan.

8. Equipment, Supplies, and Services

a. Maps and photo coverage will be otained as needed.

b. Insecticide

(1) Amount available -

Mixes Insecticide - 43,670 gallons

Concentrate ethylene dibromide - 5,435 gallons

Diesel Oil - 24,000 gallons

Estimated amount needed of mixed insecticide - 700,000 gallons

(2) Mixing Plants - One dump is located at the Island Park Ranger Station with a capacity of 10,000 gallons per day. The other is located at Rapid Creek Guard Station and has a capacity of 8,000 gallons per day.

The insecticide to be used will be ethylene dibromide concentrate mixed at a ratio of 1 to 19 with No. 2 burner oil. This mixture is used at the recommendation of Regional Office Insect and Disease Control personnel as the most effective and economical insecticide for the bark beetle.

c. Transportaion

(1) Vehicles - The following insect-control vehicles are available on the Forest for the project:

5 - 1/2-ton pickups

2 - 4x4 carryalls

1 - 1-ton panel

1 - 1 1/2-ton truck

9 - 4x4 weapons carriers

1 - 4x4 3/4-ton pickups

1 - 4x4 six-passenger pickup

3 - 4x2 six-passenger pickups

The weapons carriers are expensive to use and should be replaced with 4x4 six-passenger pickups.

The following are anticipated vehicle needs in addition to what is listed above:

29 - 1/2-ton pickups

33 - 4x4 carryalls

4 - 1 1/2-ton trucks

(These vehicles will be obtained from the regular Forest fleet as much as possible.)

It is planned that two mechanics will be detailed from the Salt Lake or Boise repair shops to take care of maintenance requirements.

(2) Pack Stock - Except for the few animals available on the Forest, it is planned to contract our needs for pack stock.

d. Camps

A large, semi-permanent camp is now located at the Island Park Ranger Station. A small temporary camp is set up near Kilgore, Idaho. Several small force account tent camps may be needed for isolated treating units. These will be set up as needed.

e. Communications

The present Forest radio and telephone net is now considered sufficient for the project. Minor additional needs or installations, excess to other Forest needs, will be provided.

f. Miscellaneous Supplies

The Regional Office Insect and Disease Control Branch has a copy of our inventory as of the end of the spring 1966 project. These have been depleted to a certain extent, but the major part is still intact. Necessary supplies will be purchased through the regular channels prior to September 15th.

9. Treating Standards

a. Paintlining Specifications

(1) Properly lay out areas for treatment on a base map, considering the following:

(a) Access for goop hauling, personnel, packers, and/or other mechanical equipment.

(b) Terrain.

(c) Mark outside boundary of infestation with a yellow line where necessary.

(2) A sketch map of each treating unit will be prepared on at least a 4" scale. This map will show the following:

(a) Boundaries of unit and sub-units if sub-divided.

(b) Stringlines with numbers.

(c) Number of trees spotted in each lane.

(d) Physical features and section lines and numbers.

The zone supervisor will be responsible for seeing that these maps are prepared for each treating unit. Prepare the original on transparent paper of plastic. Copies can then be made on the blue-ray machine in the S.O. Plastic map sheets are available in the S.O.

(3) Each treating area will be divided into lanes separated by painted lines. All lines, except outside boundary of unit, will be marked with orange paint instead of string.

(a) Enough trees on the paintline will be marked, so that each marked tree is visible from the other.

(b) In large openings, the paintlines will be flagged on bushes at least every chain with orange flagging.

(c) Lane widths will be no less than one chain and no more that three chains. Lanes should average two chains wide.

(d) The orange paint marks on the lines will be at least 6 feet high and no more than 8 feet high and on both sides of the tree facing the direction of the line. These marks will be no more than six inches in diameter.

(e) The beginning and endings of each line will be at a tree marked with an orange flagging completely around the tree.

(f) Lines within a subunit will be consecutively numbered with the lane being on the right of the line.

(g) Beginnings and endings of each line will be tagged with light colored tags and so marked. Line numbers will also be written on each tag. Wherever the line crosses a road or trail, a tag will be placed on one side of the road or trail and marked with the line number and flagged with orange flagging.

b. Spotting Specifications

(1) Spotters will be required to spot 100 percent of the infested trees on any area. A tree will be considered infested if it has a DBH of 4 inches or more, and contains live, young mountain pine beetle, larvae or pupae twenty-four inches above the ground line or higher.

(2) Spotting crews will consist of at least three spotters and one crew leader. (This may vary to one crew leader supervising more crews as men gain experience and less spotters per lane may be used.)

(3) Spotters will make a visual check of all live lodgepole pine with a DBH of four inches or greater within a stringline. Only when the visual examination reveals indication of infestation such as frass, pitch tubes, or entrance holes will the spotter chop into a tree. To check a suspected tree, the spotter will check with his hatchet in not more than three places. He will, therefore, need to inspect each tree at least as close as arm's length.

(4) When an infested tree is found, the tree will be tagged for treating with an orange or blue tag on alternate lanes. This tag will be divided by a horizontal perforation across the middle. Each half will be identically numbered. The spotter will mark the stringline number on each half and staple the tag to the tree by the upper edge of the top half, and a staple in the bottom half with the tag facing the beginning of the stringline. The opposite side of the tree will be blazed. At least 3 staples will be put into the tag.

(5) Trees will be blazed on the opposite side from tags and fiscal year written on the blaze.

(6) Each person will be permitted to spot only after he has been trained and has demonstrated his capability in determining an infested tree.

c. Spraying Specifications

(1) All infested trees treated standing must be sprayed to a height of at least thirty feet or to a four-inch top, whichever is lower.

(2) On trees treated standing with an infestation higher than thirity feet, spray crews will fell such trees only if the height of infestation exceeds thirty feet on more than five of the trees in any stringline, and they are not all in a group. If such trees are in groups of three or more they will be felled and treated.

If more than five of the trees within a stringline are infested above thirty feet, the sprayers will spray standing as high as possible and fell them and spray the remaining infested portion. The project supervisor of each unit will be responsible for determining if it is necessary to fell the trees.

(3) Stumps on felled trees will not exceed 12 inches in height on the uphill side. Infested trees adjacent to any body of water which can not be sprayed standing without having direct streams of the spray falling into the water will be felled away from the water and sprayed on the ground.

(4) Any obstruction of a road or trail caused by felling of trees will be cleared by the spray crew. Slash within 100 feet of an improved road will be piled.

(5) All trees, standing or felled, will be sprayed in such a manner that no insecticide flows into a body of water. All slash will be lopped to a two inch top.

(6) Trees which are less than twelve inches DBH will be sprayed on at least three sides. Trees which are over twelve inches DBH will be sprayed on four sides.

(7) In spraying, the sprayer will start spraying at the high point on the tree and spray downward to the base in one slow movement. The insecticide will be sprayed so that it flows down the tree as it is sprayed. A tree will not be considered as being adequately sprayed if it is only dampened.

(8) Trees felled for treating will be sprinkled thoroughly with insecticide on all sides of the infested portion.

(9) All infested trees visible from roads, and highways in the travel influence zone or visible from bodies of water in the water influence zone will be felled and treated. Such trees will be piled and burned, except that where such burning will endanger live trees, the felled trees and slash will be skidded and slash scattered so as not to be visible from such roads, highways or bodies of water. On areas of little travel, the above may not be done. However, approval must be obtained from the District Ranger to make such exceptions.

d. Quality Control

(1) Contract

(a) One hundred percent of the trees treated by a contractor will be checked for compliance with contract specifications.

(b) The Forest insect quality control officers will make spot-checks and document on check report from R4-5200-2.

(c) The Regional Office entomologists will be called to periodically check the development of the insects so that treating may be stopped when it is no longer technically pratical to continue.

(d) The Regional Office insect control officer or his representative will be asked to check our treating techniques to insure that we are doing the job properly.

(2) Force Account

(a) Each force account treating crew will be checked at least once a week by the project supervisor or his assistant. This check will be documented on a check report (R4-5200-2).

(b) The district file of these check reports will be checked periodically by the Forest insect control officer or his representative. They will also spot-check spotting and treating crews.

(c) Each zone will have a quality control checker who will check all work on a systematic basis and report to the zone supervisor.

10. Multiple Use Coordination

Overall planning and project coordination for the entire treating project is assigned to the insect control officer under the direction of the timber staff officer. Multiple use coordination supervision for each individual treating unit is the responsibility of each District Ranger involved, who also has the responsibility for assuring that all phases of the work are conducted in accordance with the management requirements and decisions contained in the Regional Multiple Use Management Guide and the Ranger District multiple use plans. The Forest Supervisor retains the authority to terminate treating activities if they result in unacceptable impacts on Forest resources. A Stage I multiple use survey and report for the entire project has been prepared and approved by the Forest Supervisor.

No project work will commence until a Stage II multiple use survey and report has been prepared by each District Ranger involved, and approval recommended by the Forest Supervisor. Copies will be made available to all project personnel at the beginning of the project.

11. Information and Education

The insect control I&E and safety officer will correlate all I&E activities for the insect-control project. He will prepare news releases for radio, television, and newspapers. He will also conduct show-me trips to the various project areas.

All insect-control news releases, whether prepared by Ranger or other, will be reviewed by the Forest I&E Officer. This is to insure effective coordination of these news releases.

See Appendix B for the I&E plan for the insect-control project.

12. Roads

a. The following is the proposed project road program for the next two fiscal years. (Shown in miles)

Road No.	Name	Const.	Reconst.	Maint.	FR&T	I&DC
80250	Mike Spencer	0	0	3.0	0	3.0
Non-System	Pine Creek	4.0	0	0	0	4.0
Non-System	Henderson	2.0	0	0	0	2.0
Non-System	Dry Fork	2.0	0	0	0	2.0
80236	Mahogony	0	0	8.8	1.8	7.0
20008	South Leigh	2.5	0	2.0	2.5	2.0
20007	North Leigh	0	0	7.0	0	7.0
20013	Dry Ridge	0	0	6.2	0	6.2
Non-System	Hovermale	0	0	3.0	0	3.0
20267	Rammel	0	0	12.0	0	12.0
Non-System	Teepee Creek	8.0	7.5	0	11.5	4.0
20266	Jackpine	8.0	7.5	0	11.5	4.0
80380	McReynolds	0	0	3.0	0	3.0

80265 20261	Reclamation	12.0	0	20.0	32.0	0
80243	Fall River Ridge	15.0	0	0	15.0	0
80246	Horseshoe Lake	0	0	6.0	0	6.0
Non-System	Y-Ranch	0	0	3.0	0	3.0
Non-System	Moose Creek Butte	3.0	0	0	0	3.0
Non-System	Bear Spring	6.0	0	0	0	6.0
80150	Warm River	0	0	8.0	0	8.0
80164	Anderson Mill	0	0	6.0	0	6.0
80165	Elk Wallow	0	0	3.0	0	3.0
80289	Coleman Canyon	0	0	5.0	0	5.0
80163	Sheep Falls	0	0	3.0	0	3.0
80167	Green Canyon (S)	0	0	12.0	12.0	0
80167	Green Canyon (N)	0	0	9.0	9.0	0
80170	Lyle Spring	0	3.0	0	3.0	0
80168	Antelope Flat	0	8.0	13.0	17.0	4.0
Non-System	North Bishop	12.0	0	0	0	12.0
80052	Stamp Mdws.	0	0	8.5	0	8.5
80035	Howard Creek	0	0	3.0	0	3.0
80034	Sheridan Creek	2.0	0	0	2.0	0
80120	Bishop Mountain	0	6.0	0	3.0	3.0
20025	Fred's Mountain	5.8	0	0	5.8	0
TOTALS		75.3	24.5	180.5	129.6	150.7

Project cost estimate for new roads - $37,500.

Road surfacing needs are included in the reconstruction column above.

b. Estimated project cost for maintenance and snow removal on existing roads - $88,400.

c. Estimated FR&T funds needed for construction and maintenance - $858,302.

13. Reports and Records

a. Records

Each zone will keep the following records and send to the S.O. at the end of the project:

(1) Daily Record of Expenditures.

(2) Progress map showing daily progress.

(a) Will be 1/2-inch scale.

(b) Will show stringlining, spotting and spraying and other treating methods as they are completed.

(3) Daily Progress Record (R4-5200-10)

(a) If a unit has both contract and force account treating, a separate record will be kept on each operation.

b. Reports

The following reports will be made as indicated:

(1) Name of Report	Due	Where	By Whom
(1) Weekly Progress Report (R4-5200-6)	Friday Monday	S.O. R.O.	Zone Supervisor Insect Control Officer

(This report is due each Monday in the Regional Office. Therefore, the reporting period will befrom Wednesday through the following Tuesday to allow the zone supervisors to have their reports in the S.O. by Friday morning. A 1/2-inch scale progress map should be sent with the report. It will be returned to the zone supervisor after the S.O. progress map is posted each week.)

(2)	Final Project Report	20 days after completion	S.O.	Zone Supervisor
		30 days after completion	R.O.	Insect Control Officer

This report will include the following:

(a) Narrative Report (see FSM 5244.32).

(b) Inventory of all insect-control equipment.

(c) Forest Insect and Disease Suppression Report, R4-5200-12 (S.O.). This report must be submitted for each state in which work is done. It will require that expenditure records, trees and acres treated, man-days worked (both force account and contract) be kept for each state by the zone supervisors.

(d) Safety Report - show the following:

Total man-hours worked and miles driven.

Number of vehicle accidents.

Personnel accidents including first aid cases, compensation cases, and lost-time accidents.

(e) Copies of daily progress records (R4-5200-10).

(f) Copies of daily expenditure records.

(g) Personnel ratings (For Official Use Only) - show the following:

Evaluation of each detailer.

Performance list showing each man that worked on the project giving name, position held, rating, and what higher position they could fill (both permanent and temporary).

(h) Pesticide Use Report (R4-5200-13) - for fiscal year only. (S.O.)

(i) Treating maps (1" scale) - show the following:

Number of trees by units.

Number of acres by units.

This should be shown by units as indicated on the treating plan maps.

(3) Inventory

A complete inventory will be kept of insect-control equipment, by each zone supervisor for his zone. The insect control supply officer will keep a complete inventory of all equipment on the Forest and report to the insect control officer.

14. Planned Work Schedule

Job	Planned Accomplish Date	Accomplished
Complete Master Plan	9/30/65	
Initial Zone Planning Meeting	9/12/65	
Aerial Reconnaissance Flights	9/28/65	
Complete Zone Survey Plans	9/12/65	
Order Supplies	9/2/65	
Order Vehicles	9/14/65	
Prepare treating contracts for review	9/13/66	
Prepare subsistence and horse contracts for review	9/13/66	
Training for spotters and checkers	10/14/65	
Let first treating contracts	9/30/66	

Start surveys	09/15/65
Complete surveys	10/15/65
Complete letting all contracts	11/01/66
Start force account treating	09/15/66
Let contracts for timber sales	10/01/65
Start timber sale preparation	08/01/65
Report survey results, revice plans	11/01/65
Complete treating contracts (if possible)	01/31/66 & 06/30/67
Fund roundup meeting	02/10/66
Report to R.O.	02/11/66
Final report on fall work	02/20/66
Make plans for spring work	03/01/66

APPENDIX A

SAFETY COORDINATION PLAN
Insect-Control Project
Targhee National Forest
F.Y. 1966

I. Objective

A. Aid implementation of Forest, District, and Zone safety plans.

B. Assist the Rangers and Zone officers in meeting their safety goals.

II. Responsibility

A. The Zone Supervisor is responsible for the safety program on his Zone.

1. He can delegate the authority for carrying out the safety program to his unit project supervisor, unit safety officer, etc., but not his responsibility.

2. Every project employee is responsible for his own safety, the safety of those he supervises, and the safety of everyone in his vicinity.

3. The Contracting Officer's Representative is responsible for gaining compliance from the contractor and his employees with regard to the safety clauses in the contract.

B. The S.O. Insect Control Officer is responsible to the Timber Staff Officer for coordinating safety activities on all phases of the insect-control project to meet the Forest safety program.

III. Action Plans

A. The project safety plans on each zone will be adhered to by all project personnel.

1. Copies of the weekly safety meetings will be forwarded weekly to the S.O.

2. Reviews of safety plans, safety meeting reports, inspection reports, accident reports, and hazard surveys will be made, and findings discussed with the district safety officer and other involved personnel.

B. Safety Hazard Analysis

The following is a safety hazard analysis report compiled from the district project safety plans:

Ethylene Dibromide (EDB, Goop)

This chemical is caustic; i.e., it will burn the skin and cause blisters. Personnel should handle with care and avoid letting it come in contact with their skin. Any chemical that does get on the skin or clothing should be washed off immediately with soap and water. Contaminated clothing should be thoroughly cleaned before re-use. (Goop dump workers should use plastic, nylon, or neoprene gloves and rubber boots.) Contaminated gloves should not be carried in pockets. The goop dumps should be protected from the public, and vice versa. Spilled goop should be cleaned up immediately, and the dump areas kept clean and orderly.

The chemical is poisonous. Containers should be marked with the work "Poison". Users will see that goop will not reach streams or lakes, damage plants, contaminate soil, or harm birds, fish, or animals.

EDB is flammable. While not explosive, the same fire precautions should be taken with it as with diesel fuel.

Finally, EDB is highly corrosive to aluminum and copper, and should never be put in containers made of any of these materials. Iron and bronze will be affected, but may be used. Natural rubber is disintegrated quickly and should not be used.

Proper Clothing

Hard hats will be worn by all personnel in the woods except those men engaged in the use of pack and saddle stock. Foremen and unit supervisors should see that all their personnel use adequate footgear.

Other items are mentioned under EDB.

Livestock

Only authorized personnel will handle saddle or pack stock. Special training will be given to inexperienced users. Make sure animals are aware of your approach or presence.

Vehicle Use

The features of weather and terrain on which vehicles will be used will necessitate extreme safety considerations and precautions. Particular attention should be given to proper qualification of drivers.

In addition: Loose equipment should not be carried in the same compartment as personnel, make frequent "808's", repair or improve bad road hazards or conditions when possible, turn off engine when dismounting, check both in front and behind vehicle before moving it, do not overload, check mud holes and chuck holes before trying to cross, and no standing in moving trucks.

Hatchets (also axes, saws, stapling hammers, other hand tools)

Keep them sharp. (Use handle and guards on files.) Keep the handles tight. (Wedges are cheap.) No horseplay, no throwing. Carry and store safely.

Game (moose, elk, bear, deer)

Avoid, if possible, but specifically do not harass. It is the season when if you see young animals there must be an anxiours mama nearby, and vice versa.

Diesel Fuel

This is a flammable liquid. There should be no smoking within 50 feet. Containers should be tagged and grounded. Refer to F.S. Health and Safety Code, Section 3.3.

Camp Facilities

Provide and check for: proper sanitation, wiring, steps, water test, gas fittings, orderliness.

General

Refer to F.S. Health and Safety Code, Section 8, for proper signing and color coding.

APPENDIX B

INFORMATION AND EDUCATION PLAN
Insect-Control Project
Targhee National Forest
F. Y. 1967

I. Introduction

The purpose of this plan is to provide for getting accurate information to the public concerning the insect problem, what the Forest Service is doing about it, and how. This must be done in order to gain their understanding and support. The insect damage and necessity for controlling it must be made known. The methods of control, and the efficiency of the operation should likewise be made clear.

The affects of the insect, if uncontrolled, on the local economy should be made known to those affected. This may include those directly affected, such as timber operators and their employees, owners of neighboring timbered lands; or those indirectly affected, such as the motel, hotel, cafe, and filling station operations who serve the traveling public. The probable spread of the infestation and resultant damage, if uncontrolled, would have a sizeable impact on the economies of the local communities.

Similarly, the economies of the towns near the projects will be bolstered by the influx of personnel and equipment brought in to do the insect control work. Approximately $2,000,000 will be spent on the projects this year, most of which will probably be re-spent in the communities near the projects.

II. Problems

Possible problems of an I&E nature which, while not necessarily anticipated, should be prepared for, include:

A. Opposition to the spraying on the grounds that there are harmful affects on fish, birds, small game, big game, or livestock. While such impressions are false, and should be corrected when encountered, it would be better to disspell such fears before they are voiced. The same is true for any possible fears for public safety due to harmful affects of EDB.

B. Adverse comments on the high expense of the work. It should be brought out that the benefits of the control program outweigh the expense.

C. Opposition to the contracting of the work; likely if contractors bring in manpower from outside areas if there is local labor available. This could become a problem if the contractors' employees conduct themselves badly, such as non-payment of bills, bounced checks, drunkenness, etc. The reasons and advantages for contracting should be made known. Efforts to work with the contractors to handle difficult personnel should be made by the Rangers and C.O.R.'s.

D. Complaints of inefficiency and/or waste. The best way to solve this problem is to insure that there is no basis for it. Contractors, their employees, and new Forest Service employees should be broadly oriented with the insect-control program and how it fits into other Forest Service programs. The reasons for rigid contract requirements, close inspections, living conditions, etc., should be explained.

E. Misunderstandings developing from the past and present cooperative State and private land treating program. The State Forester will be kept informed of project objectives. The timber staff officer will carefully review and coordinate all cooperative treating efforts and inform the public, through news media, of the applicable laws and regulations and treating objectives.

Informational signs will be prepared for placing along major highways when treating is in progress.

III. Responsibilities

A. The District Rangers are responsible for the I&E program for the projects on their districts and in their zones of influence. Particularly newsworthy items and project news of more than local interest should be forwarded to or brought to the attention of the insect control officer in the S.O. The Rangers and zone supervisiors should pay particular attention to seeing that unfavorable information does not originate from Forest Service crews and district personnel.

B. The Insect Control I&E and Safety Officer in the S.O. will be responsible for I&E work at the S.O. level, and will prepare a display on the mountain pine bark beetle.

IV. Contacts and Media

A. Newspapers

News releases will be made to applicable papers as news items come up, such as:

1. Contract awards

2. Work commences

3. Progress report (mid-project, or weekly)

4. Project completion

B. Radio

1. The program, as scheduled on KRXK, and KIGO, will be prepared by the insect control I&E officer.

2. KRXK, KIGO and Idaho Falls radio stations will be contacted for additional program possibilities.

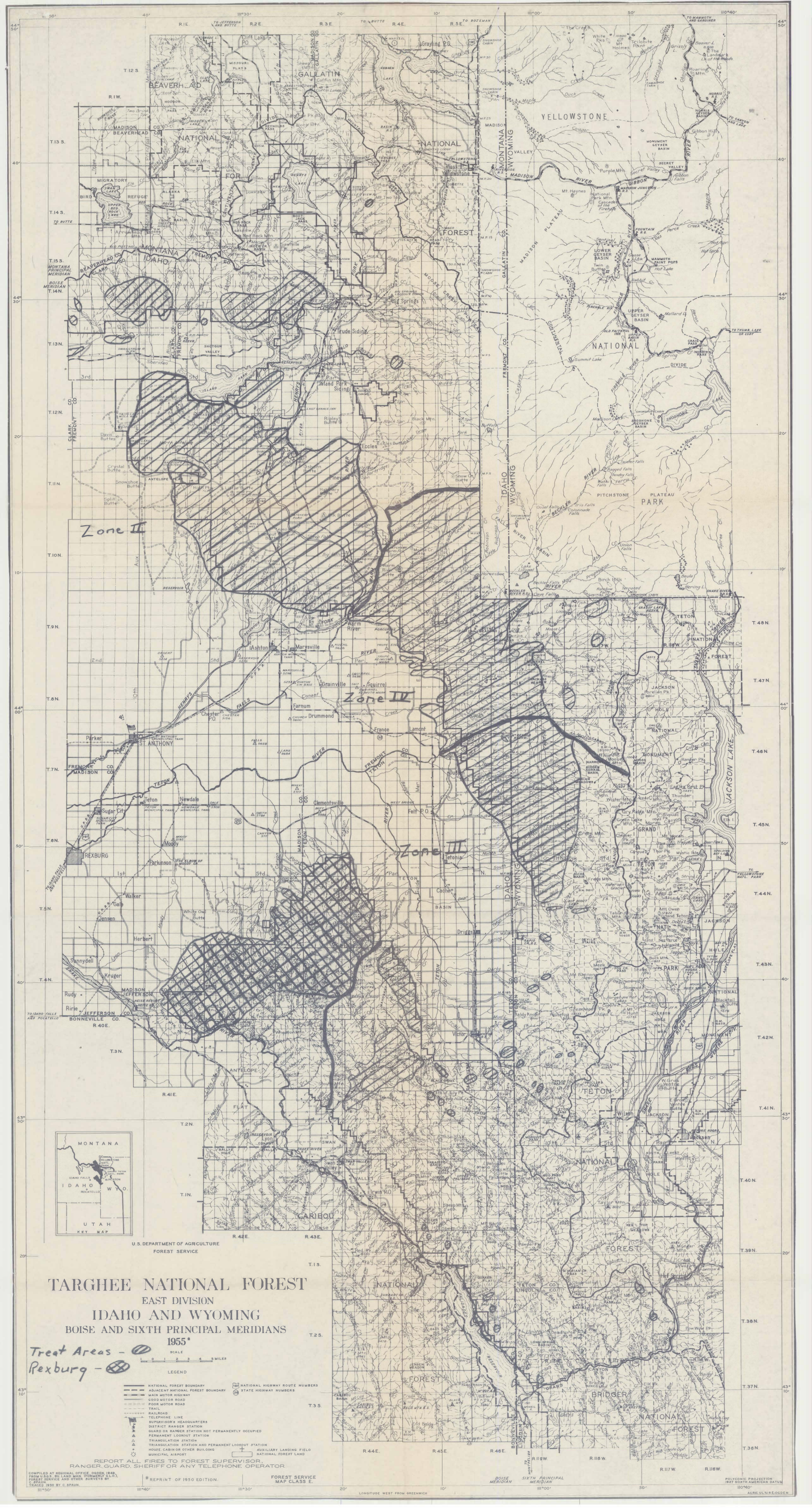
3. Newsworthy items will be furnished currently as applicable.

C. Group Presentations

1. Will be made or arranged for interested groups at their request. Forest Service members of these groups will make arrangements with the insect control officer.

APPENDIX C

MAP SECTION



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TARGHEE NATIONAL FOREST

EAST DIVISION

IDAHO AND WYOMING

BOISE AND SIXTH PRINCIPAL MERIDIANS

1955*

SCALE 0 1 2 3 4 5 MILES

LEGEND

- NATIONAL FOREST BOUNDARY
- ADJACENT NATIONAL FOREST BOUNDARY
- MAIN MOTOR HIGHWAY
- GOOD MOTOR ROAD
- POOR MOTOR ROAD
- TRAIL
- RAILROAD
- TELEPHONE LINE
- SUPERVISOR'S HEADQUARTERS
- DISTRICT RANGER STATION
- GUARD OR RANGER STATION NOT PERMANENTLY OCCUPIED
- PERMANENT LOOKOUT STATION
- TRIANGULATION STATION
- TRIANGULATION STATION AND PERMANENT LOOKOUT STATION
- HOUSE, CABIN OR OTHER BUILDING
- MUNICIPAL AIRPORT
- AUXILIARY LANDING FIELD
- NATIONAL FOREST LAND
- NATIONAL HIGHWAY ROUTE NUMBERS
- STATE HIGHWAY NUMBERS

REPORT ALL FIRES TO FOREST SUPERVISOR, RANGER, GUARD, SHERIFF OR ANY TELEPHONE OPERATOR

COMPILED AT REGIONAL OFFICE, OGDEN, 1949.
FROM U.S.G.S. BU LAND MAN. (FORMERLY G.L.O.), FOREST SERVICE AND OTHER SURVEYS BY OTHERS.
TRACED 1950 BY C. D. SPAUN.

* REPRINT OF 1950 EDITION.

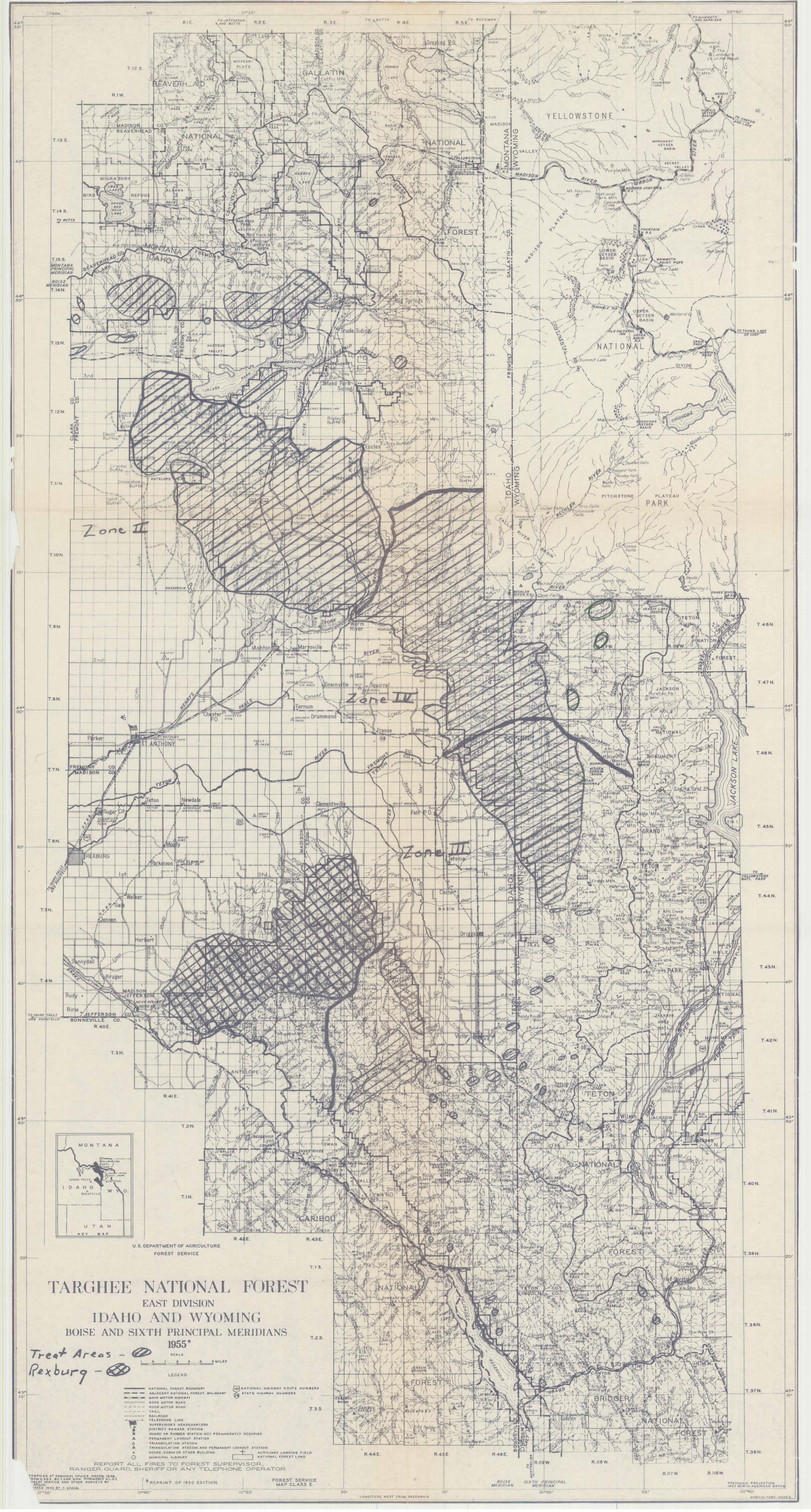
FOREST SERVICE MAP CLASS E.

BOISE MERIDIAN — SIXTH PRINCIPAL MERIDIAN

POLYCONIC PROJECTION
1927 NORTH AMERICAN DATUM

LONGITUDE WEST FROM GREENWICH

AGRIC. ULN R.E.-OGDEN.



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TARGHEE NATIONAL FOREST

EAST DIVISION

IDAHO AND WYOMING

BOISE AND SIXTH PRINCIPAL MERIDIANS

1955*

REPORT ALL FIRES TO FOREST SUPERVISOR, RANGER, GUARD, SHERIFF OR ANY TELEPHONE OPERATOR.

COMPILED AT REGIONAL OFFICE, OGDEN, 1948
FROM U.S.G.S., B.L.M. AND OTHER SURVEYS BY FOREST SERVICE AND OTHER SURVEYS BY SPRAGUE
TRACED 1950 BY C. SPRAGUE

*REPRINT OF 1950 EDITION.

FOREST SERVICE
MAP CLASS E

POLYCONIC PROJECTION
1927 NORTH AMERICAN DATUM

LONGITUDE WEST FROM GREENWICH

BOISE MERIDIAN
SIXTH PRINCIPAL MERIDIAN

AGRICULTURE-OGDEN